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(54) Wine maturing vessel

(57) A wine maturing vessel which may also be used for the fermenting process of wine, has a vessel body 1 of non-porous material, eg. glass, ceramic or plastics, embodying one or more housing(s) 2 each containing therein a wooden panel 3 through which will percolate air to join with the contents of the vessel, at a rate determined by the surface area and number of wooden panel(s) 3 being employed. Each wooden panel 3 being fluid tight sealed in its respective housing 2 by a resilient jointing member 9 in conjunction with means for securing wooden panel 3 and jointing member 9 in their housing(s). Thus a small quantity of wine stored in the vessel will mature in the same manner as a larger quantity stored in a wooden cask. The securing means may comprise at least one clip 5 (Figures 5-10) fitting within one or more grooves 8 extending around the housing, or may comprise a screw threaded retaining clip (Figure 4). The housing may be square, rectangular or circular and may be recessed or protruding outwards of the vessel body.

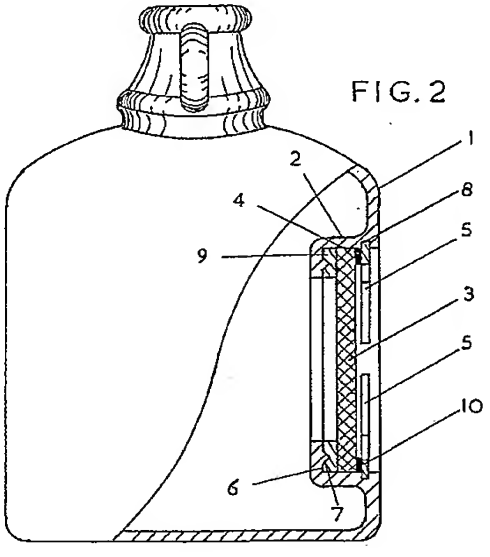

FIG. 2

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FIG. 1

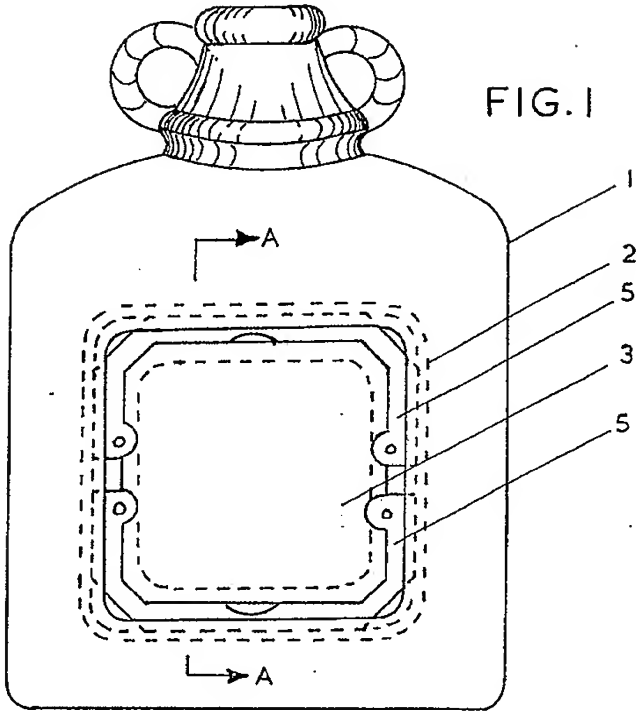


FIG. 2

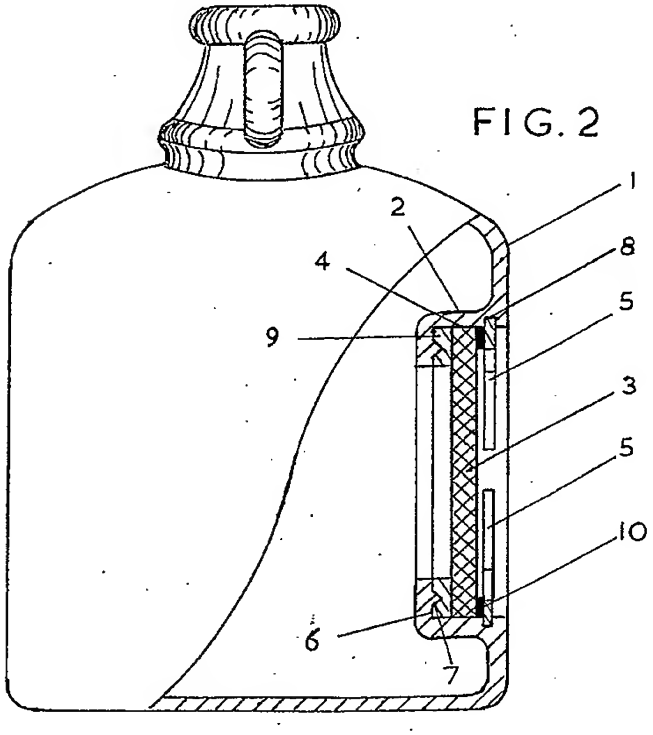


FIG. 3

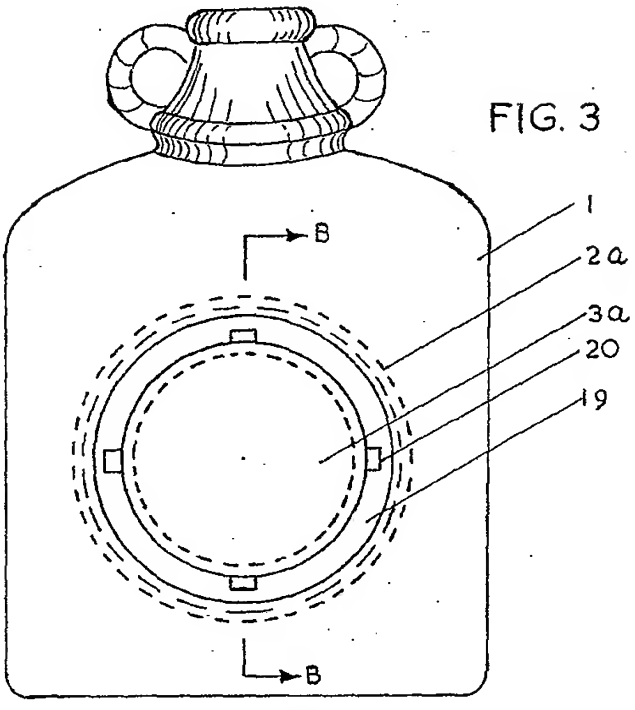


FIG. 4

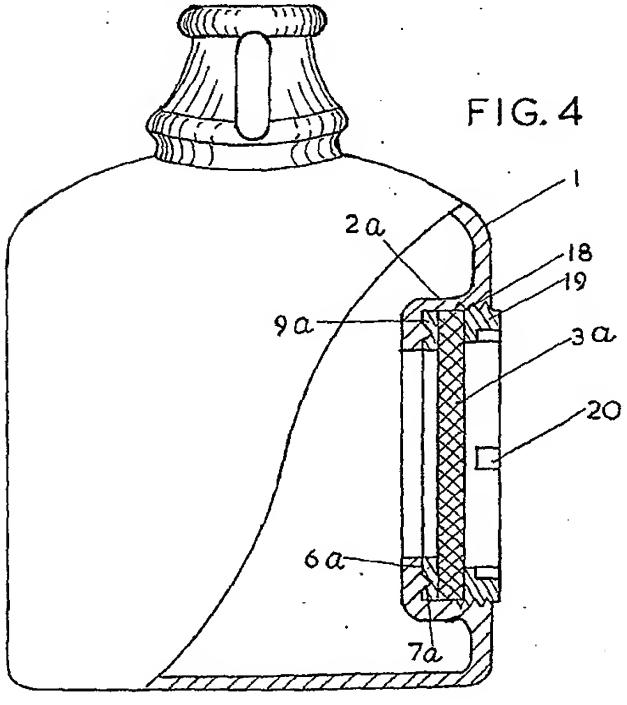


FIG. 5

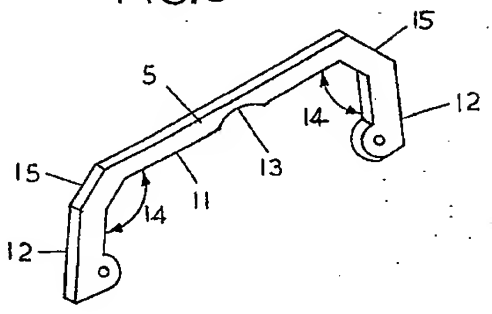


FIG. 6

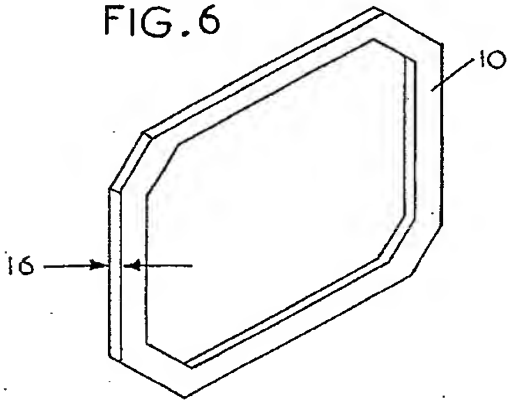


FIG. 7

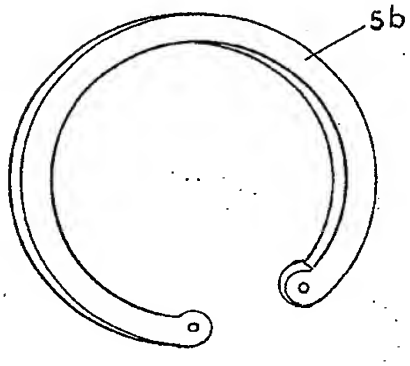


FIG. 8

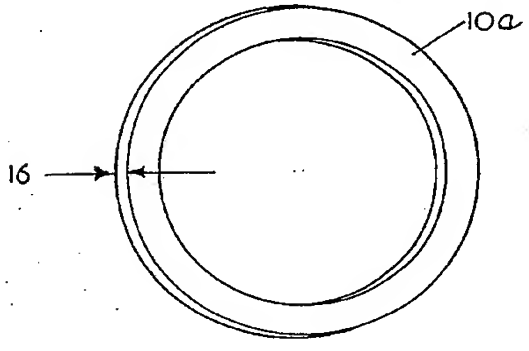


FIG. 9

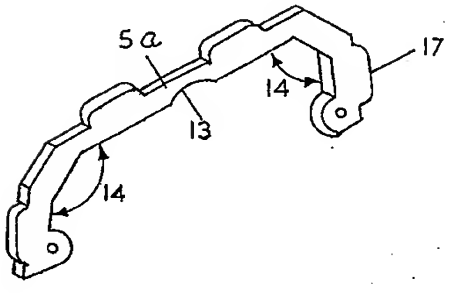
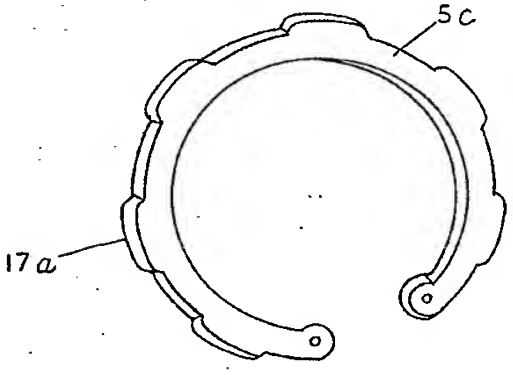


FIG. 10



SPECIFICATION

Wine and the like maturing vessel

This invention relates to a maturing vessel and provides improvement for the maturing process of relatively small quantities of wine and the like.

The demijohn and carboy are well known glass vessel's used for the maturing process of small quantities of wine and the like accordingly being of non-porous material they are unsuitable for the complete maturing process of wine and the like, to accomplish which, a certain amount of atmospheric oxygen is required to percolate through the maturing vessel's shell and join with its contents. In order to fully mature alcoholic beverages, wine in particular to perfection, storage in a large wooden vat or cask, usually oak, has been necessary whereby a unit of surface area is relatively small when compared with a unit of capacity, thus allowing a small amount of atmospheric oxygen to enter the vessel through its shell and be absorbed by a relatively large mass of liquid. Maturing of wine or the like in a small wooden vat or cask of less than 9 gallons (40.91 litres) capacity is unsuitable, whereby a unit of surface area is relatively large when compared with a unit of capacity, thus allowing excessive atmospheric oxygen to enter the vessel through its shell and be absorbed by a relatively small mass of liquid causing spoilage due to over oxidation.

It is an object of the present invention to provide relatively small and inexpensive apparatus to fully mature by regulated ingress of air, quantities of wine and the like of less than 9 gallons (40.91 litres) to similar standard normally achieved by usage of a wooden vat or cask of any capacity between 25 to 100 gallons (113.65 to 454.61 litres).

It will be realised that the demijohn and carboy type of vessel have been selected for description by way of example and not of limitation of the invention which may be employed in conjunction with any suitable configuration of vessel.

According to the present invention there is provided a wine and the like maturing vessel which may also be used for the fermenting process of wine and the like, comprising a vessel body of non-porous material and of any suitable configuration embodying one or more housing(s) each so formed as to accommodate therein a wooden panel through which will percolate atmospheric oxygen to join with the contents of said maturing vessel at a rate determined by the surface area and number of said wooden panels and housings being employed, means for securing each wooden panel in conjunction with a resilient jointing member in their respective housing so as to establish a fluid tight joint between said wooden panel and its housing.

An embodiment of the present invention will now be described, by way of example, with reference to the accompanying drawings, in which:-

Figure 1 shows a front elevation of a preferred form of the assembled apparatus according to this invention, one housing and the associated members being illustrated;

Figure 2 shows a side elevation of Figure 1 with the vessel wall partly broken away to expose a cross-sectional view along the lines A - A of Figure 1;

Figure 3 shows a front elevation of a modified version of the housing and associated members which may be used in the practice of this invention;

Figure 4 shows a side elevation of Figure 3 with the vessel wall partly broken away to expose a cross-section view along the lines B - B of Figure 3;

Figure 5 is a perspective view showing the retaining clip employed in the preferred version of the apparatus shown in Figures 1 and 2;

Figure 6 is a perspective view showing the shim or spacer employed in the preferred version of the apparatus shown in Figures 1 and 2;

Figure 7 is a perspective view showing a modified retaining clip which may be employed with a cylindrical shaped housing;

Figure 8 is a perspective view showing a modified shim or spacer which may be employed with a cylindrical shaped housing;

Figure 9 is a perspective view showing a modified retaining clip which may be employed in the preferred version of the apparatus; and

Figure 10 is a perspective view showing another modified retaining clip which may be employed with a cylindrical shaped housing.

Referring to the drawings, Figure 2 in particular, the fermenting and maturing vessel comprises a vessel body 1 made of non-porous material such as glass, ceramics or plastics, embodying one or more square or rectangular shaped housing(s) 2 with the peripheral corners thereof rounded in the form of a quadrant, said housing(s) 2 preferably recessed into vessel body 1. As previously stated more than one housing 2 may be employed in conjunction with the associated members hereinafter described, although only one such housing 2 is illustrated in the vessel shown in the accompanying drawings. At the bottom, or the vessel innermost extremity of housing 2 there is a hole extending through and into the vessel interior bounded by a projection or landing 6 which projects at right angles from the housing sidewall, incorporated in landing 6 there is a protrusion 7 situated midway accross the width thereof and extending completely therearound. Secured in housing 2 there is a wooden panel 3, preferably of oak, in sealing engagement with a flat faced reilient jointing member 9 of cork or rubber or the like disposed between landing 6 and wooden panel 3. Incorporated in the side-wall 4 of housing 2 there is a groove 8 extending completely therearound so disposed as to accommodate two retaining clips 5, partly engaged in groove 8 and partly in engagement with the external face of wooden panel 3 adjacent its periphery. Retaining clip 5 shown in Figure 5 is generally channel shaped and of spring metal or suitable hard plastics material comprising, a horizontal portion 11 and two legs 12. At the centre of horizontal portion 11 and at quidistant between legs 12 there is a reduction of width in the form of a minor segment 13 so disposed as to facilitate the movement of legs 12 when engagement or disengagement of retaining clip 5 from groove 8 is necessary, also the two corners 15

at the junction of horizontal portion 11 with legs 12 have been relieved and form a 45° bevel, likewise to facilitate engagement or disengagement of retaining clip 5. The angle 14 between horizontal portion 11 and legs 12 is 95° or thereabouts, so that when retaining clips 5 are in the assembled position tension will be established between legs 12 and horizontal portion 11 thereby firmly holding retaining clips 5 in groove 8.

In a preferred embodiment of the apparatus according to the present invention, the resilient jointing member 9 is placed into housing 2, the wooden panel 3 is next placed into housing 2 and pressure is then applied with a clamping device (not shown) to the external face of wooden panel 3 thereby positively compressing jointing member 9 between landing 6 and wooden panel 3 in order to make a fluid tight joint prior to retaining clips 5 being inserted into groove 8. Protrusion 7 formed as an integral part of landing 6 being employed to increase the jointing pressure at its point of engagement with jointing member 9 and thereby improving the joint efficiency. Because the thickness of wooden panel 3 is critical in maintaining the pressure applied to jointing member 9, and also to the relative position of retaining clips 5 with groove 8, wooden panel 3 will be made to a specified thickness with a tolerance allowing for a negative thickness only. In order to accomodate any thickness of wooden panel 3 below the specified dimension, flat shims or spacers 10 as shown in Figure 6 and made of metal or hard plastics material may be employed placed between retaining clips 5 and wooden panel 3, the spacers 10 to be of different thicknesses 16 thereby readily adjusting the amount of pressure applied to jointing member 9 so as to establish a fluid tight joint, and also the alignment of retaining clips 5 for engagement with groove 8.

In a first modified version of the apparatus the square or rectangular shaped housing(s) 2 as shown in Figures 1 and 2 may have the groove 8 replaced by slots intermittently arranged around the housing side-wall 4, so disposed as to receive two retaining clips, one such retaining clip 5a being shown in Figure 9. The slots in side-wall 4 being so positioned as to be in line with, and receive, the tongues 17 of the two retaining clips 5a when in their assembled position. Although four tongues 17 are shown around the periphery of retaining clip 5a the number may differ in practice. Apart from the addtion of tongues 17 retaining clip 5a remains the same as retaining clip 5.

In a second modified version of the apparatus the housing(s) thereof may be of cylindrical form as shown in Figures 3 and 4 and designated 2a, said housing(s) 2a embodying a landing 6a which includes a protrusion 7a, the housing side-wall incorporating a groove (not shown in Figures 3 and 4) of the same cross-section and positioned within the housing relative to landing 6 as is groove 8 illustrated in Figure 2. Housing(s) 2a accommodating a circular shaped jointing member 9a and a disc shaped wooden panel 3a, the jointing member 9a and wooden panel 3a being as shown in Figures 3 and 4. Circular shaped spacers 10a of different thicknesses 16 as shown in Figure 8 being employed for the adjustment of a circular shaped retaining clip 5b (shown in Figure 7) so that it engages with the housing side-wall groove as previously described.

In a third modified version of the apparatus the housing(s) thereof may be cylindrical and have intermittently arranged slots around the housing side-wall, so disposed as to reveive retaining clip 5c shown in Figure 10, the slots being so positioned in said housing side-wall as to engage the tongues 17a of retaining clip 5b when in its assembled position. The apparatus otherwise remaining as described in the last preceding paragraph.

In a fourth modified version of the apparatus as illustrated in Figures 3 and 4 the housing(s) 2a may be cylindrical and embody a screw-threaded side-wall 18, so disposed as to accommodate a tubular externally screw-threaded retaining ring 19 incorporating therein four cut-outs or slots 20 partially extending into the retaining ring inside wall and equally spaced circumferentially thereabout for usage in conjunction with a tightening wrench (not shown), said retaining ring 19 to be of metal or hard plastics material, housing(s) 2a also embodying a landing 6a and a protrusion 7a. Accommodated in housing 2a there is a circular jointing member 9a and a circular or disc shaped wooden panel 3a, both the latter members being secured and fluid tight sealed in their housing by retaining ring 19.

Finally, it is to be understood that all the versions of the apparatus according to this invention and herein described, may have the housing(s) thereof either recessed into and/or protruding outwards of the vessel body.

CLAIMS

1. A wine and the like maturing vessel which may also be used for the fermenting process of wine and the like, comprising a vessel body of non-porous material and any suitable configuration embodying one or more housing(s) each so formed as to accommodate therein a wooden panel through which will percolate atmospheric oxygen to join with the contents of said maturing vessel at a rate determined by the surface area and number of said wooden panels and housings being employed, means for securing each wooden panel in conjunction with a resilient jointing member in their respective housing so as to establish a fluid tight joint between said wooden panel and its housing.

2. A wine and the like maturing vessel as claimed in claim 1, wherein the vessel body incorporates one or more either square, rectangular or cylindrical shaped housing(s) at the bottom of which is a hole extending through and into the vessel interior bounded by a projection or landing which projects at right angles from the housing side-wall, said landing incorporating a ridge or protrusion situated mid-way accross the width thereof.

3. A wine and the like maturing vessel as claimed in claim 1 or claim 2, wherien the housing(s) side-wall incorporates a groove extending completely therearound so disposed as to engage with either two channel or one circular shaped

retaining clip(s).

4. A wine and the like maturing vessel as claimed in claim 1 or claim 2, wherein the housing(s) side-wall incorporates a series of in line intermittently placed slots extending therearound so disposed as to engage with the tongues projecting from the outer periphery of either two channel or one circular shaped retaining clip(s).

5. A wine and the like maturing vessel as claimed in claim 3 or claim 4, wherein shims or spacers may be employed placed between the wooden panel and the retaining clip(s) in order to adjust the pressure applied to the resilient jointing member so as to establish a fluid tight joint, and also the alignment of the retaining clip(s) for engagement with the housing side-wall groove or slots.

6. A wine and the like maturing vessel as claimed in claim 1 or claims 2, wherein said housing is cylindrical shaped and embodies a screw-threaded side-wall so disposed as to accommodate a tubular externally screw-threaded retaining ring.

7. A wine and the like maturing vessel as claimed in any of claims 1 - 6 including in combination therewith either a square, rectangular or disc shaped wooden panel fluid tight sealed in its housing with a resilient jointing member.

8. A wine and the like maturing vessel as claimed in any of claims 1, 2 or 5, wherein the housing thereof is either recessed into and/or protruding outwards of the vessel body.

9. A wine and the like maturing vessel substantially as described herein with reference to Figures 1,2,5 and 6 or with the modification of Figures 3,4,7,8,9 and 10 of the accompanying drawings.

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